

CLAIMS

1. Method for controlling the use of a program signal in a broadcast system, comprising one or more broadcasters and a number of receivers, at least a part of the receivers preferably having a storage medium for storing program signals, 5 wherein the program signal comprises content signals of a first and a second type, wherein the second type of content signals is inserted in time slots in the first type of content signals, wherein at least the first type of content signals is scrambled using control words as scrambling keys to obtain a scrambled 10 program signal and wherein the scrambled program signal is broadcasted together with entitlement control messages (ECM's) containing the control words in an encrypted manner using a second key, wherein decrypting means are provided at each receiver for retrieving the control words from the ECM's by decrypting the ECM's, and wherein the control words are delivered 15 by the decrypting means for descrambling the program signal, characterized in that at least a plurality of ECM's comprises control information to control the decrypting means in such a manner that at least the time slots for second type of content signals are maintained in the first type of content signals. 20

2. Method according to claim 1, wherein a real time clock is operated at the receiver side, wherein the control information of an ECM near the beginning of a time slot for the second type of content signals indicates a delay before a next 25 ECM can be decrypted by the decrypting means.

3. Method according to claim 1, wherein the ECM's comprise first ECM's for the first type of content signals and second ECM's for the second type of content signals, wherein at least a plurality of first and second ECM's is provided with 30 control information, wherein the decrypting means checks the control information and delivers decrypted control words of the first or second ECM's in accordance with the control information to descramble content signals of the first or second type, respectively.

35 4. Method according to claim 3, wherein the control information of said plurality of ECM's comprises timing infor-

mation, wherein a real time clock is operated at the receiver side, wherein the decrypting means checks the timing information of each ECM by means of the real time clock and continues to deliver control words of the ECM's for descrambling the program signal only if the timing information corresponds with the time indication provided by the real time clock.

5. Method according to claim 4, wherein a sequence identifier and a minimum delay which should pass before a next ECM should be decrypted are added to said plurality of ECM's as timing information, wherein the decrypting means checks the time passed by means of the real time clock and continues to deliver a next control word only if the time passed corresponds with the minimum delay.

6. Method according to any one of claims 1-5, wherein the control information of the ECM's comprises a sequence identifier including an index number of the previous and/or next ECM's, wherein the decrypting means checks the index number of a received ECM against the expected index number, wherein the control word is only provided if the index number received matches the expected index number.

7. Method according to claim 1, wherein the control information of an ECM comprises information on the insertion of the second type of content signals in the first type of content signals.

8. Method according to claim 3 and 7, wherein at least a plurality of first ECM's provides control information for the decrypting means indicating the decrypting means to use a plurality of second ECM's, wherein the control information may comprise timing information on the time period for using first ECM's and on the time period for using second ECM's, and information on the point within the first type of content signals for inserting the second type of content signals.

9. Method according to claim 8, wherein the second type of content signals comprise content signals with corresponding ECM's representing various contents, wherein the control information of at least a part of said plurality of first ECM's comprises selection identifiers for allowing only a selected content signal with corresponding ECM's to be used for

insertion into the first type of content signals as second type of content signals, wherein in particular the selection identifiers select the content signal depending on the time of the day.

5 10. Method according to claim 8 or 9, wherein the decrypting means enforces the receiver to use all second ECM's corresponding to the time period indicated for using the second ECM's independent of the receiver being tuned to the corresponding program signal source.

10 11. Method according to any one of the preceding claims, wherein the ECM's are inserted in the program signal in synchronisation with the change of the control words used to scramble the program signal.

12. Method according to any one of the preceding
15 claims, wherein the decrypting means is provided as a software module broadcasted by a broadcaster, wherein the software module is executed in the receivers, wherein the software module is regularly changed by the broadcaster.

13. Method according to claim 3, wherein an ECM of the
20 first ECM's for the first type of content signals comprises control information to switch the decrypting means to deliver only first ECM's for the first type of content signals if the decrypting means indicate a viewing mode allowing the use of the first content signals only.

14. Control device for a receiver for carrying out the
25 method according to any one of the preceding claims, comprising decrypting means for retrieving the control words from ECM's by decrypting the ECM's, and for delivering decrypted control words descrambling a program signal, characterized in that the
30 decrypting means is adapted to check the control information of the decrypted ECM's and to insert a time slot in the first type of content signals as indicated by the control information.

15. Control device according to claim 14, wherein the
decrypting means delivers decrypted control words of the first
35 or second ECM's in accordance with the control information to descramble content signals of the first or second type, respectively.

16. Control device according to claim 14 or 15, fur-

ther comprising a real time clock, wherein the decrypting means
is adapted to check the timing information in the control in-
formation of each ECM by means of the real time clock and to
continue to deliver control words of the ECM's for descrambling
5 the program signal only if the timing information corresponds
with the time indication provided by the real time clock.

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